

FEDERAL CIVILIAN EMPLOYMENT

The Congress of the United States
Congressional Budget Office

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, DC 20402



NOTES

Unless otherwise indicated, all years referred to in this report are fiscal years.

Details in the text and tables of this report may not add to totals because of rounding.

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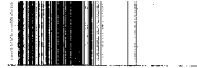
PREFACE

Federal workers account for about 3 percent of civilian employment in the United States. This special study by the Congressional Budget Office (CBO) examines the characteristics of the federal work force and the changes it has experienced during the past decade. The report was prepared at the request of the House Committee on Post Office and Civil Service.

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December 1987



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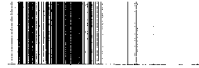
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SUMMARY

About 3 percent of all civilian employees in the United States work for the federal government--over 3 million in all. The federal civil service is diverse and complex. Its members represent more than 900 different occupations, over 100 different agencies direct their efforts, and roughly three dozen pay systems govern their wages and salaries. Despite its size and diversity, however, the federal civilian work force exhibits several dominant, defining characteristics. Three agencies, for example, account for more than two-thirds of all federal workers: the Department of Defense (DoD), the U.S. Postal Service (USPS), and the Veterans Administration (VA). The evolution of the federal work force over the past decade, moreover, has been marked by definite trends, and these trends often stand in clear contradiction to popular views about the civil service.

CHANGES IN THE SIZE OF THE CIVILIAN WORK FORCE

Current federal civilian employment is about 7 percent higher than the level of 2.85 million a decade ago (see Summary Table 1). By comparison, the growth of nonfederal civilian employment was far greater--about 25 percent over the same period. The U.S. civilian population also grew more. In 1977, each federal worker served 76 citizens; by 1987, that number was about 79.

While not insignificant, growth in the federal work force over the past decade does not correspond to the rapid expansion commonly perceived as always occurring in government. The 7 percent rise in federal jobs translates to an average annual increase of only about 0.7 percent, and the growth has not been universal. In fact, it was driven largely by the expansion at just two agencies--the Department of Defense and the U.S. Postal Service (see Summary Figure 1). Together these two agencies added more than 225,000 jobs, an increase of about 14 percent. At DoD, growth has occurred as part of the defense buildup. At the USPS, the increase represents in part a response to the growing demand for postal services. Outside of these two agencies,

the largest single increase in employment occurred at the Veterans Administration, where the growing health care and other needs of the aging veterans population led the Administration and the Congress to permit growth that added about 20,000 jobs--an increase of 9 percent.

Otherwise, federal employment has generally fallen, largely as a result of the Administration's efforts to reduce nondefense employment. The Administration imposed a freeze on federal hiring in 1981, and later lowered employment ceilings. At the same time, the Administration has promoted improvements in management as a way of bettering the delivery of federal services and holding the line on federal jobs. One of the largest single decreases in employment occurred

SUMMARY TABLE 1. FEDERAL CIVILIAN EMPLOYMENT, U.S. CIVILIAN POPULATION, AND U.S. CIVILIAN EMPLOYMENT, 1977-1987

	1977	1979	1981	1983	1985	1987 a/	Change 1977-1987	
							Number	Percent
Federal Civilian Employment (In thousands)	2,854	2,897	2,910	2,878	3,001	3,050	196	7
Civilian Population (In millions)	217	222	227	232	236	241	23	11
U.S. Civilian Employment (In millions)	79	86	88	87	94	98	20	25

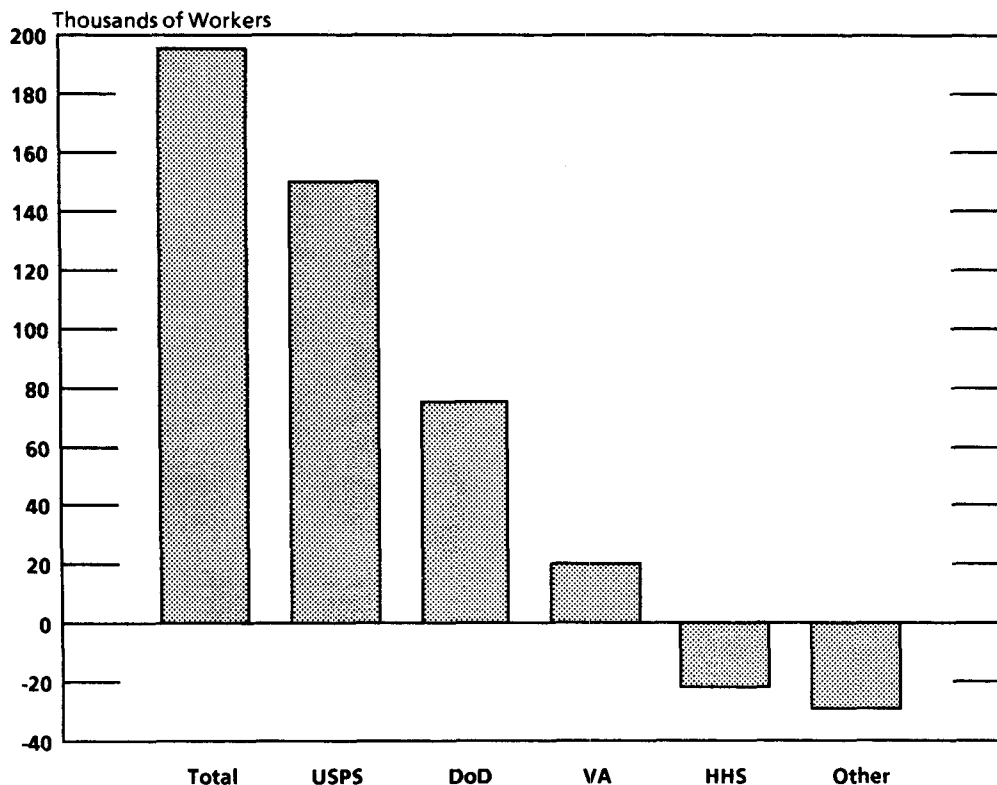
SOURCE: Congressional Budget Office from data provided by the Office of Personnel Management and the Departments of Labor and Commerce.

NOTE: Data represent annual averages of monthly totals. Averages for government cover permanent and temporary appointments as well as full-time, part-time, and other work schedules. All geographic areas are represented, as are all agencies except the Central Intelligence Agency and other intelligence-gathering organizations. Averages for U.S. civilian employment cover employees on nonfederal, nonagricultural payrolls.

a. Covers only October 1986 through May 1987.

at the Department of Health and Human Services (HHS), reflecting, among other things, the closing of underused public health facilities and the computerization of operations at the Social Security Administration. From 1977 through 1987, employment at HHS (including that of the Department of Education--the two were one agency until

Summary Figure 1.
Changes in Federal Civilian Employment by Agency, 1977-1987



SOURCE: Congressional Budget Office from data provided by the Office of Personnel Management.

NOTES: Data cover permanent and temporary appointments as well as full-time, part-time, and other work schedules. All geographic areas are included, as are all agencies except the Central Intelligence Agency and other intelligence-gathering organizations.

USPS = U.S. Postal Service; DoD = Department of Defense; VA = Veterans Administration; HHS = Department of Health and Human Services (with the Department of Education).

Data for fiscal year 1987 cover only the months of October 1986 through May 1987.

1980) fell by 22,000, or 14 percent. A drop of similar magnitude was experienced by the Department of Agriculture, mainly reflecting cutbacks in the Forest Service. (See Table A-1 in the Appendix for further detail on federal employment trends.)

COMPOSITION OF THE NONPOSTAL CIVILIAN WORK FORCE

About 80 percent of all federal civilian employees outside the Postal Service hold white-collar jobs such as secretary, accountant, and attorney (see Summary Table 2). About three-quarters of these workers

SUMMARY TABLE 2. EDUCATIONAL ATTAINMENT AND OCCUPATIONAL DISTRIBUTION OF FEDERAL CIVILIAN NONPOSTAL FULL-TIME PERMANENT WORKERS, MARCH 1976 AND MARCH 1986

Occupational Group	Percent of Work Force		Percent of Work Force With Bachelor's Degree or Better	
	1976	1986	1976	1986
White-Collar <u>a/</u>	76	80	32	38
Professional	16	18	85	88
Administrative	19	24	41	46
Technical, clerical	39	36	7	9
Blue-Collar	<u>24</u>	<u>20</u>	1	2
All Occupations <u>b/</u>	100	100	25	31

SOURCE: Congressional Budget Office from data provided by the Office of Personnel Management.

NOTE: Covers full-time permanent employment for all agencies but the U.S. Postal Service, the Tennessee Valley Authority, the Central Intelligence Agency, and certain other smaller agencies. Overseas employment included in the data is limited to U.S. citizens.

a. Includes workers in "other" white-collar occupations, a designation applied to guards, fire fighters, and similar jobs.

b. Includes workers in jobs for which an occupation was not specified when reported to the Office of Personnel Management. The number of such workers with a bachelor's degree or better fell by about 5,000 between 1976 and 1986.

hold jobs in occupations designated professional, administrative, or technical. The federal clerical work force represents only about 20 percent of all workers outside the Postal Service.

Over the past decade, as the problems with which government is asked to deal have become larger and more complex, the work force has shifted into more skilled professional and administrative jobs. In 1976, about 35 percent of all nonpostal workers held jobs with such designations, and by 1986 the figure had risen to about 42 percent.

Educational Attainment

As its concentration in higher-skilled occupations suggests, federal workers are well educated and have become increasingly so over the past decade. In 1976, about 25 percent of all nonpostal employees had earned a bachelor's degree or better; by 1986, the figure had risen to 31 percent (see Summary Table 2). The trend toward higher educational attainment holds regardless of the occupational group considered. Not unexpectedly, the professional occupations--such as nurse, accountant, biologist, and engineer--show the highest level of educational attainment. About 88 percent of workers in such jobs had earned a bachelor's degree or better as of 1986, up from 85 percent 10 years earlier. Even in technical and clerical jobs, however, about 45 percent of all workers have some college education, and about 9 percent have at least a bachelor's degree.

Length of Federal Service

The average length of service for the nonpostal civilian work force (including time served in the military) is 13.5 years, down slightly from 14.1 years in 1976. Among the factors that may have contributed to this decline is the growing role of women in the federal government. Women, who generally have shorter tenures than men, currently make up about 40 percent of all full-time nonpostal workers, up from 35 percent a decade ago. The recent jump in retirements may also have contributed to the drop in average service. Particularly noteworthy is the increase in retirements from the Senior Executive Service (SES), which is composed of the government's top managers. The rate of retirements from SES in 1986 was 6.1 percent, up from 4.6 per-

cent in 1985 and 3.8 percent in 1981. Although the SES is too small to affect overall statistics much, the recent increase in departures reinforces widespread concerns about the government's ability to retain experienced executives.

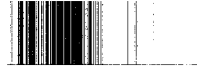
WHAT FEDERAL WORKERS DO AND HOW WELL THEY DO IT

To what missions does the government apply the skills of its large body of highly skilled workers? About 60 percent of all federal workers support just two federal activities--providing for the national defense and delivering the mail. Most of the remaining workers are divided almost evenly among five different activities: management of natural resources and transportation (engaging about 8 percent of all federal workers); administration of benefit payments to states and assistance to states and localities (7 percent); provision of health care to war veterans (7 percent); tax collection and other general government management (6 percent); and research and information activities (6 percent).

Data on productivity suggest that the federal work force has generally performed well in carrying out its various missions. Productivity refers to the efficiency with which resources are used. As measured by the Bureau of Labor Statistics (BLS), federal productivity represents the amount of goods or services produced with a given amount of labor. The productivity of a procurement operation, for example, may be measured as the number of contracts awarded per year of work. According to BLS data, federal productivity rose at an average annual rate of 1.4 percent from 1977 through 1986. At the Defense Department, annual productivity growth for the period averaged 1.2 percent, slightly below the performance of the government as a whole. In fact, productivity at DoD has actually declined in recent years. At the Postal Service, productivity has increased at an average annual rate of 1.2 percent since 1977. Growth in productivity for the rest of government was relatively strong over the period, averaging 2.0 percent per year.

The Administration has made growth in productivity a cornerstone of "Reform 88," its program to improve management. By an Executive Order issued in 1986, the Administration established a goal for annual productivity growth of 3 percent for selected activities. While that goal is well above the historical average for all agencies, labor productivity improvement for several broad government functions has reached or exceeded the standard in recent years. Nevertheless, as time passes, agencies may face a shrinking supply of activities that offer the kind of potential for productivity improvement necessary to sustain the program's target rate. Moreover, the Administration hopes to achieve 3 percent growth in measures of productivity that consider not only labor but also capital and other resources involved in production. Such measures often show less growth for the same effort than measures that consider only labor, such as those maintained by the Bureau of Labor Statistics.

Productivity, of course, is only one aspect of doing a job well. Data on productivity reveal nothing, for example, about the quality of government services. Problems of accuracy and timeliness, moreover, make BLS data difficult to use in decisionmaking at the program level. As an overall barometer of trends in efficiency, however, BLS data offer a fair measure. In this context, the productivity data reported here suggest a steady improvement in federal performance over time.



CHAPTER I

INTRODUCTION

The federal civil service, with its 3 million civilian employees, may be entering a new era in which recruiting and keeping qualified workers will become increasingly difficult. 1/ Factors commonly cited as contributing to this phenomenon include recent retirement reforms that lessen financial incentives to stay in government, widespread criticisms of the bureaucracy that reduce the perceived prestige of public service, and growing dissatisfaction with changes in federal personnel management under the Civil Service Reform Act of 1978. The limits placed on annual federal pay adjustments during the past decade may also be a factor.

In response to these and other concerns, proposals for reforming compensation and other personnel practices abound. Some proposals find their way into legislation considered by the Congress. 2/ At the same time, the Congress faces the continuing, and sometimes conflicting, need to economize in government programs and reduce federal deficits. Congressional deliberations on matters affecting the federal civil service may give rise to a number of questions--among them, what is the nature of the government's work force? 3/ In an effort to help answer this question, this Congressional Budget Office study:

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1. For a further discussion, see Charles H. Levine and Rosslyn S. Kleeman, "The Quiet Crises of the Civil Service: The Federal Personnel System at the Crossroads" (Occasional paper, National Academy of Public Administration, Washington, D.C., December 1986).
 2. Legislation before the 100th Congress includes H.R. 386, which would provide for the testing of alternative systems of compensating federal workers; H.R. 2091 (S. 987 in the Senate), which would permit the Office of Personnel Management to set higher minimum pay rates for positions with which agencies have recruitment and retention problems; H.R. 2242, which proposes improvements in the awards program under which the government recognizes superior performance; and H.R. 2966 (S. 1545 in the Senate), which proposes a simplified pay and job classification system.
 3. The analysis in this report is confined to the federal government's civilian employees. As of September 30, 1986, active-duty military personnel numbered 2.2 million.



- o Examines the size and composition of the federal civilian work force;
- o Describes changes in the size and makeup of the work force over the past decade; and
- o Considers how efficiently government employees do their job.

SIZE AND COMPOSITION OF THE FEDERAL CIVILIAN WORK FORCE

The federal civilian work force is large and diverse. For the first eight months of fiscal year 1987, federal employees numbered, on average, about 3 million--representing 3 percent of all civilian nonagricultural workers in the United States. (See accompanying box for a description of important differences in commonly used measures of the size of the federal work force.) Federal workers hold jobs in almost every major occupation. The Office of Personnel Management (OPM) reports federal employment in over 900 different occupations. More than 100 federal agencies direct the efforts of these workers, and more than three dozen pay systems determine their wages and salaries. Federal employees report to work in federal offices and facilities located throughout this country and overseas. As of May 1987, in fact, only about 11 percent of the federal work force was employed in the Washington, D.C., metropolitan area.

Despite its size and diversity, the work force exhibits certain prominent characteristics that shape and define it. About seven out of every ten federal employees, for example, work for one of just three agencies: the Department of Defense (DoD), the U.S. Postal Service (USPS), and the Veterans Administration (VA) (see Table 1). DoD remains the largest single employer, accounting for roughly one out of every three federal civilian employees. Other defining characteristics of the work force include its concentration in white-collar occupations; its large number of professionals, administrative personnel, and technicians; and its fairly high level of educational attainment.

BOX 1

MEASURING THE SIZE OF THE FEDERAL WORK FORCE

The reports and data bases on which the Congressional Budget Office (CBO) relied for the information used in this study cover varying portions of the civilian work force. Some reports, for example, cover only employees working a full-time schedule (usually 40 hours per week). Most work-force statistics, moreover, do not include information on the Central Intelligence Agency and other intelligence-gathering agencies. The Office of Personnel Management's Central Personnel Data File (CPDF), an automated system of individual records on federal civilian workers and the source of much of the data used in this report, does not cover the U.S. Postal Service, the Tennessee Valley Authority, and certain other smaller agencies. Also, its coverage of legislative and judicial branches is selective.

Just as coverage varies, so does the method used to calculate work-force totals. Much of the data presented in this report represents fiscal year averages of monthly employment counts from OPM's reports of federal civilian employment. In some cases, however, CBO relied on information representing a count of workers at a particular point in time. Other information is presented on a full-time equivalent (FTE) basis. Under this method, employment is translated to its comparable full-time value. For example, two half-time workers would count as one full-time equivalent. The FTE data used in this report, derived largely from budget documents, incorporate the full-time equivalent of overtime and holiday work. Averages of monthly data and data on an FTE basis help correct for seasonal and other variations in employment levels.

Notes in the text and tables of this report contain information on both the coverage of data in the various analyses and the method used to calculate work-force totals.

The remainder of this section describes the occupational and other characteristics of the nonpostal civilian work force. Data limitations prevent a similar analysis of the postal work force. 4/

White-Collar Workers

Most federal civilian workers hold jobs in white-collar occupations such as secretary, attorney, and accountant. Outside the Postal Service, in fact, almost 80 percent of all federal workers hold such jobs (see Table 2). About three-quarters of these workers hold jobs in occupations designated professional, administrative, or technical--with

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4. As a quasi-independent agency, the U.S. Postal Service does not report the work-force statistics that other agencies do. Wholly apart from data limitations, however, the unique character of the Postal Service argues for considering the nature of the federal work force outside the agency. In contrast to much of the rest of government, for example, the postal work force is heavily clerical. In addition, the Postal Service operates largely independently of the rest of government. Pay for postal workers is determined by collective bargaining rather than by actions of the President and the Congress. Unlike most other agencies, moreover, the Postal Service finances its operations primarily from fees charged to users of its services rather than from tax revenues. Finally, annual Congressional review of the agency's resources is limited largely to certain relatively small appropriations that support reduced postage rates for selected mailers.

TABLE 1. FEDERAL CIVILIAN EMPLOYMENT, 1987

Branch, Department, Agency	Thousands of Workers	Percent of Total
Legislative and Judicial Branches	56	2
Executive Branch	2,994	98
Department of Defense	1,072	35
U.S. Postal Service	811	27
Other Executive Branch	1,111	36
Veterans Administration	243	8
Treasury	146	5
Health and Human Services	131	4
All other agencies	<u>591</u>	<u>19</u>
Total	3,050	100

SOURCE: Congressional Budget Office from data provided by the Office of Personnel Management.

NOTE: Data are averages of employment counts for the months October 1986 through May 1987. Averages cover both permanent and temporary appointments as well as full-time, part-time, and other work schedules. All geographic areas are represented, as are all agencies except the Central Intelligence Agency and other intelligence-gathering organizations.

administrative being the single largest group. ^{5/} Among the larger job categories in these occupational groups are engineering and engineering support (about 10 percent of all white-collar workers); nurse and medical technician (about 6 percent of total); and computer specialist (about 3 percent of total). Just under 20 percent of all federal workers hold clerical jobs.

Blue-Collar Workers

Workers in blue-collar occupations--such as plumbers, electricians, and carpenters--make up a smaller share of the federal work force. As

5. While administrative jobs together make up the largest occupational group, this should not be interpreted to mean that most federal workers are managers or supervisors. According to OPM data, only about 2 percent of full-time, white-collar federal civilian workers held managerial positions as of October 1985, and 11 percent held supervisory jobs. The OPM defines a manager as a federal employee to whom supervisory personnel report. Supervisors are defined as employees who are accountable to management for the quality and quantity of work performed and for assuring efficient operations.

of March 1986, employment in blue-collar jobs made up 20 percent of nonpostal federal employment. Two agencies, the Department of Defense and the Veterans Administration, employ the vast majority of these workers. The Office of Personnel Management reports employment for more than 475 different blue-collar occupations. The largest blue-collar occupational groups include warehouse and custodial services (representing about 10 percent of total blue-collar employment); electronics, aircraft, sheet metal, and mobile equipment repair (about 14 percent); and food services and general laboring (about 6 percent).

EDUCATIONAL ATTAINMENT

As its concentration in professional white-collar occupations might suggest, the federal work force is well educated. About 31 percent of all federal civilian employees, excluding postal workers, have earned

TABLE 2. FEDERAL CIVILIAN NONPOSTAL FULL-TIME
PERMANENT WORK FORCE BY OCCUPATIONAL
CATEGORY, MARCH 1986

Occupational Category	Number (In thousands)	Percent of Total
White-Collar	1,482	80
Professional	337	18
Administrative	447	24
Technical	314	17
Clerical	346	19
Other	39	2
Blue-Collar	366	20
Unspecified	2	a/
Total	1,851	100

SOURCE: Congressional Budget Office data provided by the Office of Personnel Management.

NOTE: Data cover full-time employees with permanent appointments only. Major executive branch agencies not reporting such information are the U.S. Postal Service, the Tennessee Valley Authority, and the Central Intelligence Agency. Coverage of legislative and judicial branches is limited to major agencies. Overseas employment included in the data is limited to U.S. citizens.

a. Less than one-half of 1 percent.

TABLE 3. DISTRIBUTION OF THE FEDERAL CIVILIAN NONPOSTAL FULL-TIME PERMANENT WORK FORCE BY EDUCATIONAL ATTAINMENT AND OCCUPATIONAL CATEGORY, MARCH 1986 (In percents)

Highest Level Completed	Occupational Group					
	Profes- sional	Admin- istrative	Technical/ Clerical	White- Collar <u>a/</u>	Blue- Collar	All Groups <u>b/</u>
High School or Less	6	25	55	35	75	43
Associate Degree or Some College	6	29	36	27	23	26
Bachelor's Degree, Post-Bachelor's Work, or Master's Degree	69	43	9	33	2	27
Post-Master's Work or Ph.D.	<u>19</u>	<u>3</u>	<u>c/</u>	<u>5</u>	<u>c/</u>	<u>4</u>
All Levels	100	100	100	100	100	100

SOURCE: Congressional Budget Office from data provided by the Office of Personnel Management.

NOTE: Table covers full-time permanent employment for all agencies but the U.S. Postal Service, the Tennessee Valley Authority, the Central Intelligence Agency, and certain other smaller agencies. Overseas employment included in the data is limited to U.S. citizens.

- a. Covers all white-collar workers including workers in "other" white-collar occupations, a designation applying to guards, fire fighters, and other jobs.
- b. Includes about 2,300 workers in jobs for which an occupation was not specified when reported to the Office of Personnel Management.
- c. Less than one-half of 1 percent.

a bachelor's degree or better (see Table 3). The figure compares favorably with data showing 26 percent of the U.S. civilian nonfarm labor force having completed four years or more of college.^{6/} For federal white-collar workers, the portion with such credentials is even higher, standing at 38 percent. For professional occupations, the comparable figure reaches 88 percent. But even in technical and clerical occupations, about 45 percent of all workers have some college education, and 9 percent have earned a bachelor's degree or better.

6. Differences in data collection make precise comparisons difficult. Private-sector data cover employed civilians age 25 years and older as of March 1986 (unpublished data from the Bureau of Labor Statistics).